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Issued April 12, 1913.

U. S. DEPARTMENT OF AGRICULTURE.

*Revised July 1918*

FARMERS' BULLETIN 528.

Rev.ed.  
follows

# HINTS TO POULTRY RAISERS.

BY

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WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1913.

## LETTER OF TRANSMITTAL.

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U. S. DEPARTMENT OF AGRICULTURE,  
BUREAU OF ANIMAL INDUSTRY,  
*Washington, D. C., January 30, 1913.*

SIR: I have the honor to transmit herewith, and to recommend for publication as a Farmers' Bulletin, a paper entitled "Hints to Poultry Raisers," prepared by Mr. Harry M. Lamon, senior animal husbandman in poultry investigations in the Animal Husbandry Division of this bureau, under the direction of Mr. George M. Rommel, chief of that division. This paper is a revision of Circular 206 of this bureau.

Respectfully,

A. D. MELVIN,  
*Chief of Bureau.*

HON. JAMES WILSON,  
*Secretary of Agriculture.*

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# HINTS TO POULTRY RAISERS.

## SELECTION OF A BREED.

Be sure that the male at the head of the flock is purebred.

The Mediterranean or egg breeds are: Leghorns, Minorcas, Spanish, Blue Andalusians, and Anconas.

The American or general-purpose breeds are: Plymouth Rocks, Wyandottes, Javas, Dominiques, Rhode Island Reds, and Buckeyes.

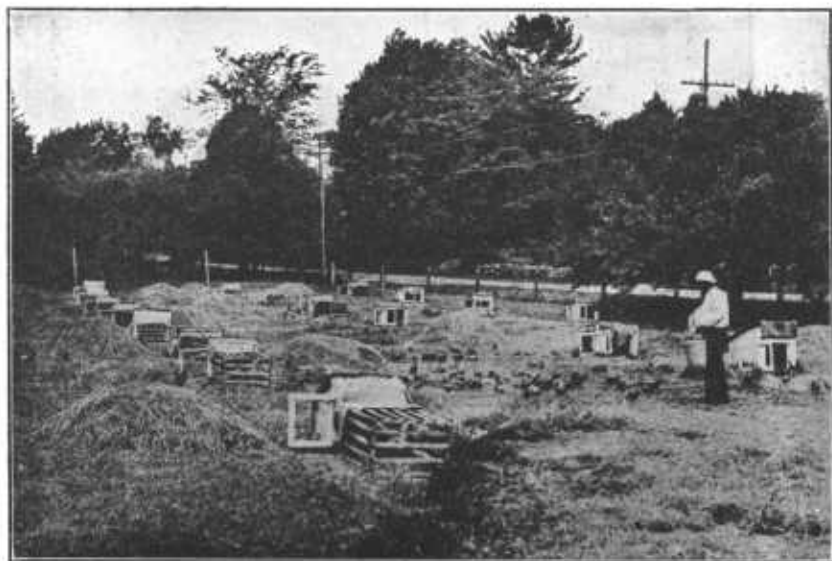


FIG. 1.—Brood coops with hens and chickens on a well-managed poultry farm.

The Asiatic or meat breeds are: Brahmas, Cochins, and Langshans.

The English breeds are: Dorkings, Orpingtons, and Redcaps.

For farm use the American breeds are probably the best.

Purebred poultry means uniformity of products.

Uniformity of products means increased profits, if products are properly marketed.

Given the same care and feed, purebred fowls will make a greater profit than mongrels.

# ATTENTION \* FARMERS

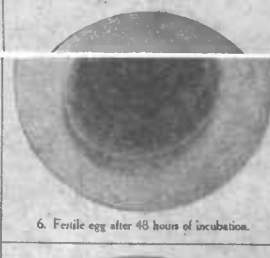
## PRODUCE INFERTILE EGGS \* PREVENT LOSS FROM BAD EGGS



2. Fertile egg after 24 hours of incubation.



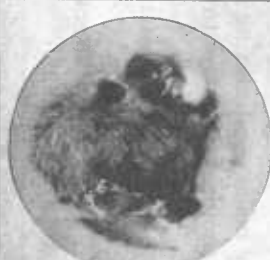
4. Fertile egg after 36 hours of incubation.



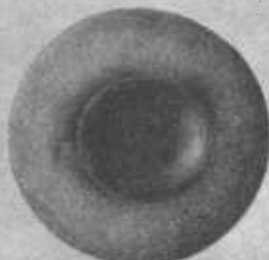
6. Fertile egg after 48 hours of incubation.



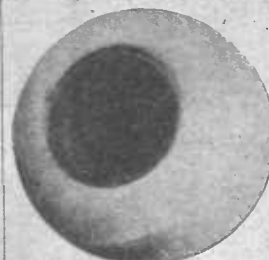
8. Fertile egg after 72 hours of incubation.



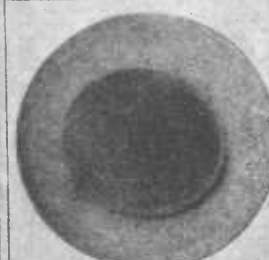
10. Fertile egg after 7 days of incubation.



1. Fresh egg.



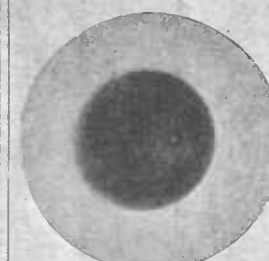
3. Infertile egg after 24 hours of incubation.



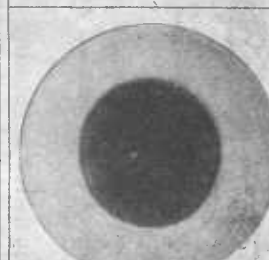
5. Infertile egg after 36 hours of incubation.



7. Infertile egg after 48 hours of incubation.



9. Infertile egg after 72 hours of incubation.



11. Infertile egg after 7 days of incubation.

The loss to the farmers of the United States from bad methods of producing and handling eggs is estimated at \$45,000,000 annually.

IT IS ALSO ESTIMATED THAT \$15,000,000 OF  
THIS LOSS IS DUE TO BLOOD RINGS.

Every dollar of this loss from blood rings is directly preventable on the farm.

(See Figures 4, 6, and 8.)

Blood rings often develop in the nest and in an unheated room in the house during the hot summer weather. (See Figures 4, 6, and 8.)

Blood rings can not be produced in the infertile egg.

Blood rings are troublesome only in hot weather.

Infertile eggs are eggs laid by hens that are not allowed to run with a male bird. (See Rule 5, below.)

A study of these pictures should quickly convince one that the infertile egg is the quality egg; therefore, produce it, by removing the male birds from the flock, and realize more money for better eggs. The removal of the male birds has absolutely no influence on the egg production.

### RULES

Farmers are urged to adhere strictly to the following rules in handling their poultry and eggs:

1. Keep the nests clean, provide one nest for every four hens.
2. Gather the eggs twice daily.
3. Keep the eggs in a cool, dry room or cellar.
4. Market the eggs at least twice a week.
5. Sell, kill, or confine all male birds as soon as the hatching season is over.

### NOTICE

Information on the care of poultry and eggs may be had by writing to the Bureau of Animal Industry, U. S. Department of Agriculture, Washington D. C.

A. D. MELVIN,  
Chief Bureau of Animal Industry.

Approved:  
JAMES WILSON,  
Secretary.

Washington, D. C., July 10, 1912.

FIG. 2.—Copy of a poster prepared by the Bureau of Animal Industry to be displayed in public places. It is inserted here to show graphically the enormous loss in the annual value of our egg crop due to blood rings. These are traceable directly to improper methods of management on the farm, but may be readily and simply prevented at little or no expense.

Subscribe for a good poultry paper.

Every poultry keeper should have a copy of the American Standard of Perfection.<sup>1</sup>

### ARTIFICIAL AND NATURAL INCUBATION AND BROODING.

Have everything ready beforehand and start your hatching operations early in the year.

A well-ventilated cellar is the best place to operate the incubator.

The machine should be operated according to the manufacturer's directions.

See that the incubator is running steadily at the desired temperature before filling it with eggs. Do not add eggs to a machine during incubation.

Turn the eggs twice daily after the second and through the eighteenth day. Cool the eggs once daily, according to the weather, from the seventh through the eighteenth day.

Turn the eggs before caring for the lamp.

Attend to the machine carefully at regular hours.

Keep the lamp and wick clean.

Test the eggs on the seventh and fourteenth days.

Do not open the machine after the eighteenth day until the chickens are hatched.

Eggs saved for hatching purposes should not be subjected to high or low temperatures.

In cold weather place from 10 to 13 eggs under the hen; in warm weather from 13 to 15.

Always test the hen on china or nest eggs before setting.

Given proper care and attention, the hen is the most valuable incubator for the farmer.

Use insect powder freely to exterminate lice when necessary.

February, March, and April are the best months for hatching.

If several hens are set in one room, it is desirable to confine them in good nests.

Straw and hay make good nesting material.

Broody hens should be moved to the permanent sitting nest at night.

Whole corn is a good feed for sitting hens. Water, grit, and dust baths should also be provided.

All eggs should be tested by the seventh day, which often makes it possible to reset some of the hens.

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<sup>1</sup> This is the official standard of the American Poultry Association and may be obtained from the secretary, Mr. S. T. Campbell, Mansfield, Ohio.



Toe-mark the chicks as soon as they are hatched. This enables one to tell their ages later.

Powder the chicks occasionally during the first eight weeks.

Start the brooder a day or two before putting in the chicks to see that the heating apparatus is working properly.

Brooder lamps should be cleaned every day.

A record should be kept of each hatch, showing the date set, number and kind of eggs, number tested out, and the chickens hatched.

Chicks should not receive feed until they are 36 hours old.

In cool weather 10 to 13 chicks are sufficient for one hen, while in warmer weather 15 to 20 can be cared for successfully.

Never mix chicks of different ages.

Confine the hen until the chicks are weaned.

The coop for hen and chicks should be well ventilated, easy to clean, and of sufficient proportions to insure comfort.

The early hatched pullet is the one that begins to lay early in the fall, when eggs are high in price.

The cockerel that can be marketed as a broiler in March or April brings more money than the one marketed in June.

### POULTRY HOUSES AND FIXTURES.

Select a location that has natural drainage away from the building.

A dry, porous soil, such as sand or gravelly loam, is preferable to a clay soil.

In most localities the building should face the south, as this insures the greatest amount of sunlight during the winter.

Allow at least 2 square feet of floor space per bird.

Proper ventilation and sunlight mean a dry house and healthy birds.

The partial open-front house is conceded to be the best type for most sections.

The colony plan of housing poultry may be adopted to good advantage on many farms. This system does away with the danger of tainted soil.

The roosts should be built on the same level, 2 feet 6 inches from the floor, with a dropping board about 8 inches below them.

Good roosts may be made of 2 by 2 inch material with upper edges rounded.

The nests may be placed on the side walls or under the dropping boards. It is best to have them darkened, as the hens prefer a secluded place in which to lay.

**FEEDING.**

In order to obtain eggs it is necessary to have healthy, vigorous stock, properly fed.

| Nature provides—    | Scientific classification.        | Poultrymen feed—  |
|---------------------|-----------------------------------|---|
| Worms and bugs..... | Nitrogenous material or protein.. | Eggs, meat (green cut bone or beef scrap), milk, or cottage cheese.   |
| Seeds.....          | Nonnitrogenous.....               | Wheat, oats, corn, barley, etc.                                       |
| Greens.....         | Succulents.....                   | Lettuce, cabbage, kale, mangels, alfalfa, clover, sprouted oats, etc. |
| Grit.....           | Mineral matter.....               | Grit and oyster shell.  |
| Water.....          | Water.....                        | Water.  |

A splendid mixture for laying hens is equal parts of cracked corn, wheat, and oats, which should be scattered in the litter.

Bran or middlings and beef scraps should be kept in receptacles to which the fowls have access at all times.

Plenty of exercise increases the egg yield.

Provide 4 or 5 inches of good, clean litter in which to scatter the grain.

Cabbages, mangels, potatoes, sprouted oats, etc., make excellent green feed.

When wet mashers are fed, be sure they are crumbly and not sticky.

For the first three days chicks may be fed a mixture of equal parts hard-boiled eggs and stale bread, or stale bread soaked in milk. When bread and milk are used, care should be exercised to squeeze all milk out of the bread. From the third or fourth day until the chicks can eat wheat and cracked corn, commercial chick feed is a good ration.

Plenty of pure, fresh water, grit, shell, and green feed should be available from the first day.

There is very little danger of overfeeding young stock.

Feed the chickens about five times daily and only what they will eat up clean in a few minutes, except at night, when they should receive all they want.

**EGG PRODUCTION.**

Produce the infertile egg. (See Rule 5, last page.)

Infertile eggs are produced by hens having no male birds with them.

Removing the male bird has no influence on the number of eggs laid by the hens.

The hen's greatest profit-producing period is the first and second years, and unless a hen is an exceptionally good breeder she should be

disposed of at the end of her second laying season and before starting to molt.

Few eggs can be expected until the pullets are matured.

If possible, mark the pullets that lay in the fall, and use them in the breeding pen for the following spring.

Soft-shelled eggs are often caused by fowls being confined, becoming overfat, and from lack of mineral matter.

### MARKETING.

Uniform products command the best prices. Purebred fowls produce uniform products.

Begin marketing the cockerels as soon as they weigh  $1\frac{1}{2}$  pounds or attain a marketable weight.

Market white-shelled and brown-shelled eggs in separate packages.

When selling eggs to the country merchant or cash buyer, insist that the transaction be on a quality basis.

Ship or deliver eggs twice or three times weekly.

Small or dirty eggs should be used at home.

When taking eggs to market they should be protected from the sun's rays.

Infertile eggs will withstand marketing conditions much better than fertile eggs.

### LICE AND MITES.

The free use of an effective lice powder is always in order.

A dust bath is very essential in ridding the fowls of lice.

In applying powder hold the fowl by the feet, head down, and work the powder well down into the feathers.

The free use of kerosene on the roosts and in the cracks will exterminate mites.

Whitewash is very effective against vermin.

### COMMON DISEASES AND TREATMENT.

All diseased birds should be isolated.

**Colds and roup.**—Disinfect the drinking water as follows: To each gallon of water add the amount of potassium permanganate that will remain on the surface of a dime.

**Canker.**—Sprinkle a little flowers of sulphur in the mouth and throat of the bird, and put some chlorate of potash in the water. Also carefully remove the exudate with the aid of warm water and apply a 2 per cent solution of creolin to the diseased tissue.

**Chicken pox.**—Apply a touch of iodine and carbolated vaseline to each sore.

**Gapes.**—New ground and vigorous cultivation will often remedy this trouble.

**Scaly legs.**—Apply vaseline containing 2 per cent of creolin to the affected parts, and after 24 hours soak in warm soapy water. Repeat treatment until cured.

**Diarrhea in hens.**—Low-grade wheat flour or middlings is good for this trouble. Also give teaspoonful of castor oil containing five drops of oil of turpentine to each fowl.

**Bowel trouble in chicks.**—Well-boiled rice mixed with a little charcoal will often check this complaint. Dissolve 15 grains of crude catechu in each gallon of drinking water.

### RULES.

It is urged that all farmers and poultrymen adhere strictly to the following rules in handling their poultry and eggs:

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